

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PROVISIONAL APPLICATION FOR UNITED STATES LETTERS PATENT

Express Mail Label No.	:	ER760526098US
Date Deposited	:	March 10, 2004
Attorney Docket No.	:	RM-QD4
No. of Dwg. Figs./Sheets	:	11/7
No. of Claims	:	
Total	:	13
Independent	:	1

Temporary Trash Holder

by

Donald G. Quick

ROHM & MONSANTO, P.L.C.
Attorneys at Law
660 WOODWARD AVENUE, SUITE 1525
DETROIT, MICHIGAN 48226
TELEPHONE (313) 965-1976
TELECOPIER (313) 965-1951

0001

Temporary Trash Holder

0002 Relationship to Other Applications

This application claims the benefit of United States Provisional Patent Application Number 60/453,399 filed March 10, 2003.

0003 Background of the Invention

0004 *FIELD OF THE INVENTION*

0005 This invention relates generally to trash and lawn bag support arrangements, and more particularly, to an arrangement for temporarily holding accumulated trash at events.

0006 *DESCRIPTION OF THE RELATED ART*

0007 There are known a number of arrangements for supporting trash bags in various states of deployment. Such arrangements are generally light in weight and are not structured for heavy use as would be the case in a special event where many people are crowded together and easily can upset the arrangement, whereby the content trash is spilled, or the arrangement is displaced or misappropriated.

0008 The known arrangements are not well suited for use during outdoor concerts or other events such as golf events, or by parks departments or other organizations that have but occasional need for large numbers of trash containers and where it would be impractical or undesirable to store large numbers of conventional trash cans.

0009 It is, therefore, an object of this invention to provide a sturdy trash container that can withstand the disturbances that are common in large outdoor events.

0010 It is another object of this invention to provide a trash container that can be secured to reduce the likelihood of same being removed without authorization.

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0011 It is also an object of this invention to provide a trash container that can be secured to existing furniture, fencing, or other structures.

0012 It is a further object of this invention to provide trash container that can be secured to a stand-alone support.

0013 It is additionally an object of this invention to provide a trash container that can be secured with a tamper resistant security arrangement.

0014 It is yet a further object of this invention to provide a trash container stand that will support the trash container securely and upright.

0015 It is yet another object of this invention to provide a trash container system that readily can be stored and/or transported in quantity with limited space requirements.

0016 Summary of the Invention

0017 The foregoing and other objects are achieved by this invention which provides in an apparatus aspect thereof a trash bag support structure having an annular member for supporting the trash bag in open condition and a resilient annular clamp arranged to surround the annular member circumferentially. A marginal portion of the trash bag is interposed between the annular member and the resilient annular clamp. There is additionally provided a tension latch arrangement for applying a tension force to the resilient annular clamp and urging same against the annular member.

0018 In one embodiment of the invention, the tension latch arrangement is provided with a resilient latching element. The annular member and the resilient annular clamp are fixedly coupled to one another at a predetermined fixation point. Further in this embodiment, the tension latching arrangement is disposed in the vicinity of the predetermined fixation point, and there is further

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provided a support arrangement coupled to the annular member and the resilient annular clamp in the vicinity of the predetermined fixation point.

0019 In a further embodiment, the support arrangement is adapted to couple to existing structure in an outdoor event environment, and there is further provided a locking arrangement for preventing unauthorized decoupling of the support arrangement from the existing structure of the outdoor event environment. The support arrangement is provided with a coupler portion that is adapted to couple to an existing park bench by overlying a back board member of the existing park bench. The locking arrangement is provided with a locking element that engages the coupler portion and the back board member of the existing park bench simultaneously to prevent the unauthorized decoupling.

0020 In a further embodiment, the support arrangement is provided with a coupler portion that is adapted to couple to a horizontal member of a preexisting railing system. The locking arrangement is provided with a locking element that engages the coupler portion and the back board member of the horizontal member of the preexisting railing system simultaneously to prevent the unauthorized decoupling.

0021 A still further mounting and securing arrangement involves the use of a stanchion that couples securely to coupler portion and that is insertable into the ground, whereby the trash bag support is supported securely in an upright manner independent of preexisting structure.

0022 Brief Description of the Drawing

0023 Comprehension of the invention is facilitated by reading the following detailed description, in conjunction with the annexed drawing, in which

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0024 Fig. 1 is a schematic representation of a temporary trash holding container constructed in accordance with the principles of the invention;

0025 Fig. 1a is an enlarged schematic representation of a portion of the temporary trash holding container of Fig. 1;

0026 Fig. 2 is a top plan representation of the temporary trash holding container of Fig. 1;

0027 Fig. 3 is a front elevation representation of the temporary trash holding container of Fig. 1;

0028 Fig. 4 is a side plan representation of the temporary trash holding container of Fig. 1;

0029 Fig. 5 is a schematic representation of a stanchion for supporting the temporary trash holding container of Fig. 1;

0030 Fig. 6 is a top plan representation of the stanchion of Fig. 5 as seen along section A-A;

0031 Fig. 7 is a top plan representation of the stanchion of Fig. 5 as seen along section B-B;

0032 Fig. 8 is a schematic elevation representation of a transporter arrangement for the temporary trash holding container;

0033 Fig. 9 is a schematic plan representation of the transporter arrangement of Fig. 8;

0034 Fig. 10 is a simplified isometric representation of the temporary trash holding container of the present invention; and

0035 Fig. 11 is a simplified isometric representation of a resilient lock arrangement for use in the temporary trash holding container of the present invention.

0036 Detailed Description

0037 Fig. 1 is a schematic representation of a temporary trash holding container 10 constructed in accordance with the principles of the invention. As shown, temporary trash holding container 10 is formed of a trash bag 12 that is supported on a hoop arrangement 14 that has, in this specific

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illustrative embodiment of the invention, an integrally formed mounting portion 16. The support portion is shown to be coupled to a stanchion 20 that has a coupler 22 attached thereto, which is shown to be coupled to mounting portion 16. In this specific illustrative embodiment of the invention, mounting portion 16 is precluded from being easily removed from coupler 22 by operation of a tamper resistant lock 18.

0038 Stanchion 20 serves as a stand that supports hoop arrangement 14 in a substantially horizontal orientation whereby trash bag 12 is conveniently disposed to receive trash (not shown). The stanchion has a pointed portion 25 that penetrates ground soil 27. Such penetration is facilitated by a foot plate 29 that serves the multiple purposes of enabling an installer (not shown) to use his or her foot to urge pointed portion 25 into the soil, define the desired depth of the penetration, and provided additional stability to the stanchion. Preferably, the height of stanchion 20 is established such that the bottom of trash bag 12 rests on the surface of the ground to help support the weight of the trash (not shown) therein.

0039 Fig. 1a is an enlarged schematic representation of a portion of hoop arrangement 14 of temporary trash holding container 10, shown in Fig. 1. Trash bag 12 is shown to be interposed between two substantially concentric hoops, arranged in the form of an inner hoop 30 and an outer hoop 31. Outer hoop 31 is urged radially inward toward inner hoop 30 by operation of a latching arrangement 33 (see, Fig. 1) that will be described in greater detail below. As will be discussed below, inner hoop 30 and outer hoop 31 are formed of steel strap (flat bar). The outer hoop is characterized by a measure of resiliency whereby it can be loosened to permit entrance and removal of trash bag 12, and can be urged circumferentially by a resilient latching element 35 in latching

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arrangement 33 that maintains outer hoop 31 in a condition of circumferential tension whereby a radial retention force is applied to the portion of trash bag 12 interposed between the hoops.

0040 Fig. 2 is a top plan representation of the temporary trash holding container 10 of Fig. 1, particularly hoop arrangement 14 and mounting portion 16 coupled thereto. This figure illustrates that, in this specific illustrative embodiment of the invention, hoop arrangement 14 has a substantially annular configuration. Inner hoop 30 is formed of 3/16 inch steel flat bar that has been annularly formed and outer hoop 31 is formed largely of 1/8 inch steel flat bar that has been correspondingly annularly formed to surround inner hoop 30 circumferentially. In this specific illustrative embodiment of the invention, hoop arrangement 14 has an internal diameter of 1 foot 6 inches. Mounting portion 16 extends radially outward of hoop arrangement 14 for approximately 3 7/8 inches.

0041 Fig. 3 is a front elevation representation of temporary trash holding container 10 of Fig. 1. As shown, mounting portion 16 has a length of approximately 8 inches in this specific illustrative embodiment of the invention.

0042 Fig. 4 is a side elevation representation of temporary trash holding container 10 of Fig. 1. It is seen in this figure that the overall front-to-back dimension in this specific illustrative embodiment of the invention is 1 foot 9 5/8 inches. The flat bars that form inner hoop 30 and outer hoop 31 have a width of 1 1/4 inches. The height of mounting portion 16 is 5 1/4 inches with a width of 2 1/4 inches. The rearmost portion of mounting portion 16 extends downward for 4 1/4 inches.

0043 Fig. 5 is a schematic representation of stanchion 20 for supporting temporary trash holding container 10 of Fig. 1. As shown, stanchion 20 has, in this specific illustrative embodiment of the invention, an overall length of 3 feet 2 1/4 inches above foot plate 29. Pointed portion 25 has an

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overall length of 1 foot 6 $\frac{1}{4}$ inches below foot plate 29. The portion of stanchion 20 above foot plate 29 has a diameter of about 1 $\frac{1}{2}$ inches, while pointed portion 25 has a diameter of about 1 inch.

0044 Fig. 6 is a top plan representation of stanchion 20 of Fig. 5 as seen along section A-A (i.e., coupler 22) of Fig. 5. Coupler 22 is formed of $\frac{1}{8}$ inch thick steel plate, and is dimensioned at about 1 foot by 5 and 15/16 inches.

0045 Fig. 7 is a top plan representation of stanchion 20 of Fig. 5 as seen along section B-B (i.e., foot plate 29) of Fig. 5. Foot plate 29 is formed of 3/16 inch thick steel plate in this embodiment, and is dimensioned at about 1 foot by 5 and 15/16 inches.

0046 Figs. 8 and 9 represent schematically a transporter arrangement 40 for carrying and storing a stacked plurality of temporary trash holding containers (without respective trash bags 12). Fig. 8 is a schematic elevation representation of a transporter arrangement 40. More specifically, transporter arrangement 40 includes a base portion 42 having a generally square configuration, 1 foot 10 inches on each side, with a height of 1 $\frac{1}{4}$ inches. In this embodiment, the sheet steel that forms the base is turned inward at the bottom 44 thereof by about 4 inches.

0047 There is installed on base portion 42 a length of $\frac{1}{2}$ inch steel round stock 46 that extends upwardly from base portion 42 for about 3 feet 9 inches, then horizontally for about 1 foot 5 $\frac{1}{8}$ inches, and then back down to base portion 42. A second length of $\frac{1}{2}$ inch steel round stock 47 is similarly formed, but has a lesser height (by about $\frac{1}{2}$ inch) that is configured so that steel round stock 47 is accommodated at the top thereof under steel round stock 46. Fig. 9 is a schematic plan representation of transporter arrangement 40 of Fig. 8 and shows steel round stock 46 and steel round stock 47 to be disposed orthogonally to one another on base portion 42 of 1/8 inch steel plate.

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0048 In use, multiple ones of hoop arrangements 14 (see, *e.g.*, Fig. 4) are deposited over steel round stock 46 and steel round stock 47 for storage and/or transport. Of course, the hoop arrangements do not have installed thereon, during such storage and/or transport, either respective trash bags 12 or stanchions 20.

0049 It is to be understood that the present invention is not limited to use in connection with individual stands, such as a stanchion 20. Mounting portion 16 can readily be installed on existing outdoor structure, such as the back of a park bench (not shown) or a railing (not shown). The railing or park bench may have a hole (not shown) drilled therethrough that accommodates the shaft portion of tamper resistant lock 18.

0050 Fig. 10 is a simplified isometric representation of hoop arrangement 14 and mounting portion 16 of temporary trash holding container 10 of the present invention.

0051 Fig. 11 is a simplified isometric representation of a latching arrangement 33 for use in conjunction with temporary trash holding container 10 of the present invention. Latching arrangement 33 has a resilient latching element 35 that is pivotally coupled at one end to a latch coupler 50 that is welded to a secured portion of outer hoop 31 (*i.e.*, where outer hoop 31 is fixed, such as by welding, to inner hoop 30 and mounting portion 16). A latching fork 52 has a pair of fork-like tines formed integrally therewith and is fixed to the loose end of outer hoop 31. In operation, while outer hoop 31 is in a loosened condition, such as by latching arrangement 33 being unlatched, the user (not shown) can accommodate trash bag 12 between inner hoop 30 and outer hoop 31, as shown in Fig. 1a. Once trash bag 12 has been installed, the user will manually pull handle portion 55 of resilient latching element 35 to stretch resilient latching element 35 until larger diameter portion 57 is disposed beyond latching fork 52, at which time the shaft of resilient latching

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element 35 is inserted between the tines of latching fork 52. In this manner, the energy stored in resilient latching element 35 applies a circumferential force that resiliently urges outer hoop 31 radially against inner hoop 30, thereby holding trash bag 12 therebetween.

0052 Although the invention has been described in terms of specific embodiments and applications, persons skilled in the art may, in light of this teaching, generate additional embodiments without exceeding the scope or departing from the spirit of the invention described herein. Accordingly, it is to be understood that the drawing and description in this disclosure are proffered to facilitate comprehension of the invention, and should not be construed to limit the scope thereof.